

Safety Precautions

Thank you for purchasing our product. Before using the product, please read this instruction manual carefully and abide by safety precautions. After reading, keep it on hand for quick reference.

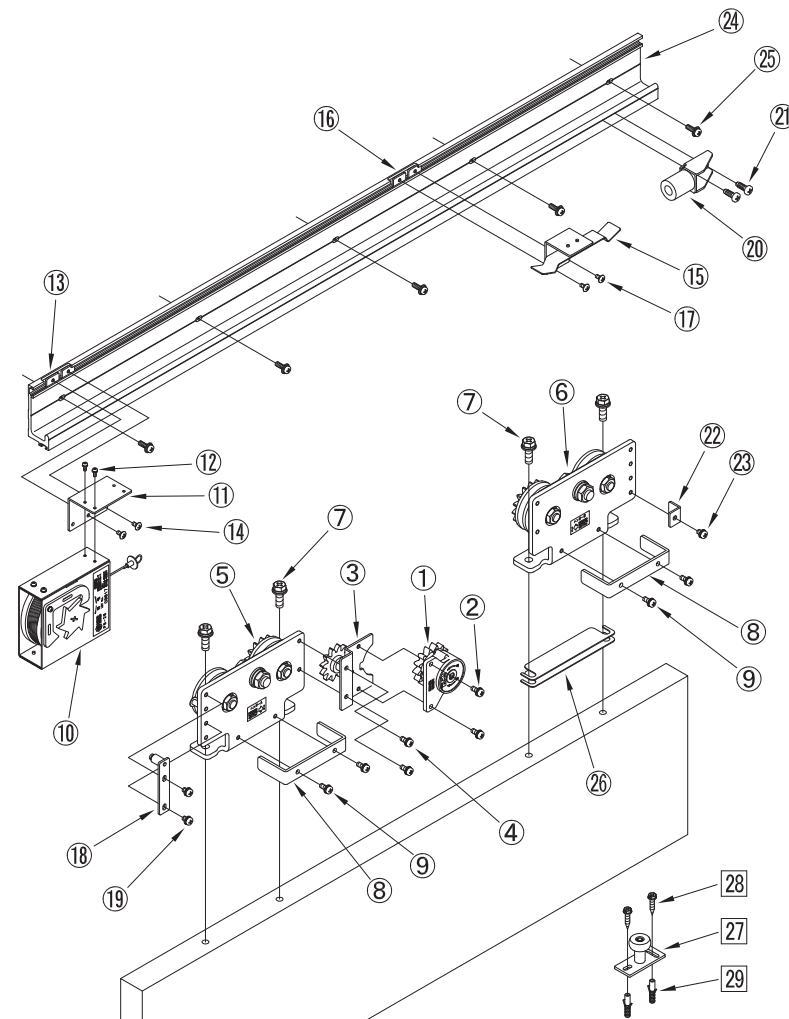
《Safety Precautions》

1. Do not use product for unspecified door dimensions or door weight
2. If the 'Control Device' of the sliding door closer becomes ineffective, the door could close vigorously with possible risk of injury. Should there be any oil leakage, component damage or ineffective control could occur, despite speed adjustment. Replace the control device promptly.
3. Guarantee and performance of the product cannot be upheld should the product be disassembled or remodeled in anyway.
4. Securely tighten the screws that mount the product. Failure to observe these precautions may cause product damage or accident.
5. Be sure to install the Door Retaining Fitting (part 5 below), Failure to observe this instruction may dismount the door with possible risk of injury.
6. Do not open the door strongly; Failure to observe this precaution may cause product damage or accident.
7. Be sure to install the doorstopper on the door back end.
8. Do not drop or strike any of the components. Failure to follow this precaution may cause a breakdowns
9. The closer incorporated in the product causes the door to close on its own. Therefore do not close the door with a strong force. Any such actions may cause the door to close vigorously, resulting in an unexpected accident or defect.
10. Take care not to let a child play with or bang the door.

《Precautions to be taken to ensure a long service life》

1. Wipe off dust and dirt from the rail and door rollers.
2. Conduct periodic checks for lose screws and other anomalies.

Parts details (The product can be converted between the right- and left-handed opening types. This drawing shown represent a right-handed opening type.)



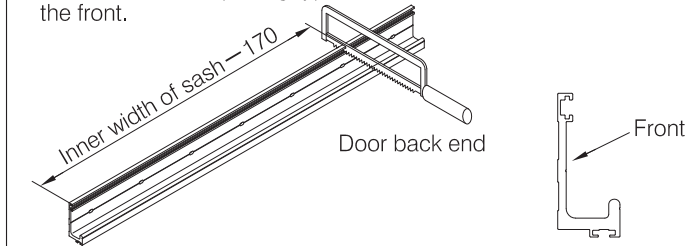
No.	Parts name	Quantity	Remarks
①	Control device	1	
②	Pan head screw M5X12	2	
③	Control device bracket	1	
④	Pan head screw M5X12	2	
⑤	Hanger A	1	
⑥	Hanger B	1	
⑦	Cross recessed hexagon head screw M8X25	4	
⑧	Door retaining fitting	2	
⑨	Pan head screw M5X12	4	
⑩	Pull spring	1	
⑪	Pull spring bracket	1	
⑫	Pan head screw M3X8	2	
⑬	Plate nut	2	
⑭	Truss screw M4X8	2	
⑮	Plate spring	1	
⑯	Plate nut	2	
⑰	Truss screw M4X8	2	
⑱	Stop roller	1	
⑲	Pan head screw M5X8	2	
⑳	Door stopper fitting	1	
㉑	Pan head drill screw $\phi 6 \times 19$	2	
㉒	Door stopper plate	1	
㉓	Pan head screw M5X8	1	
㉔	Rail L=3100 [L=4900]	1	
㉕	Pan head screw M5X16	11 [17]	
㉖	Height adjusting plate (t=1.0mm)	4	
㉗	Guide roller	1	Option
㉘	Hexagon head tapping screw $\phi 5 \times 25$	2	Wood, For fisher plug
㉙	Hexagon head screw M5X12	2	For steel
㉚	Fisher plug $\phi 6 \times 30$	2	Concrete, for mortar

Installation (These drawing shown represent a right-handed opening type. The left-hand opening type is a symmetrical with the type represented in these drawing.)

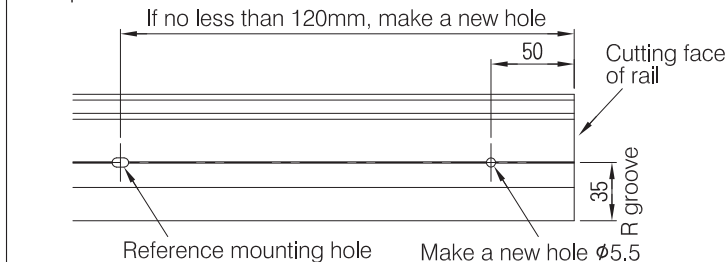
1 Installing a rail

① Cutting the rail, drilling a new mounting hole.

- Cut the rail to the inner width of the sash less 170mm.
- Cut off the door end according to the instructions
 - For the right hand opening type, cut off the right end as viewed from the front.
 - For the left hand opening type, cut off the left end as viewed from the front.

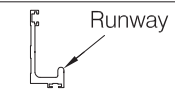


- If the distance between the cutting face of the rail and the reference mounting hole is no less than 120mm, make a new hole $\phi 5.5$ mm at the position 50mm from the rail end.



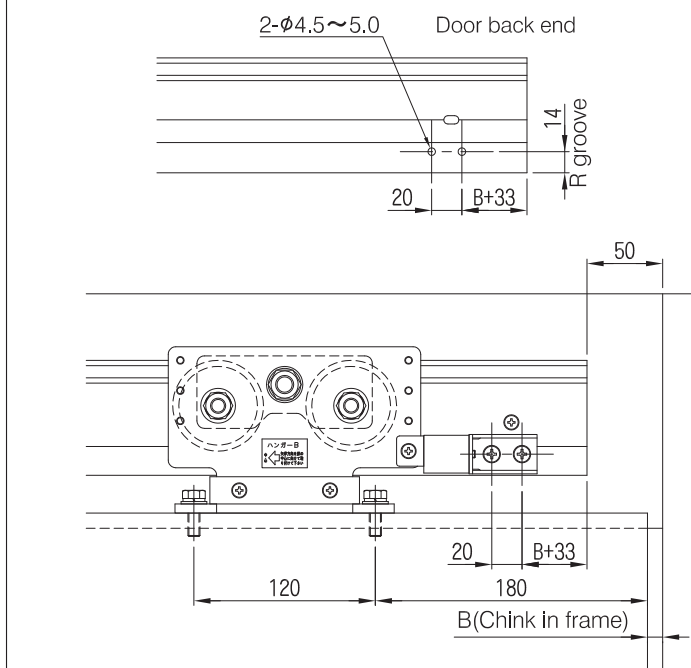
⚠ Caution

- When making any change in the rail, take care not to scratch the runway.



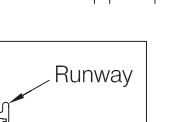
② Drilling a hole for door stopper.

- As shown in diagram drilling a two holes ($4.5\text{mm} \sim 5.5\text{mm}$) in the rail.



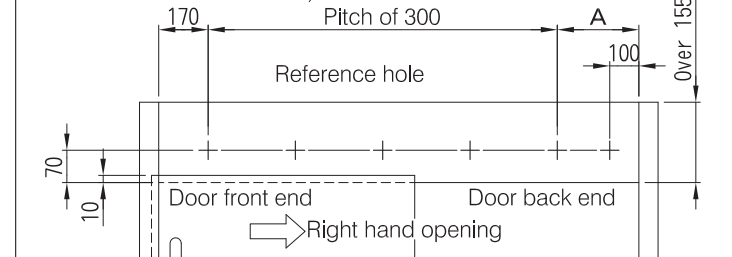
⚠ Caution

- When making any change in the rail, take care not to scratch the runway.



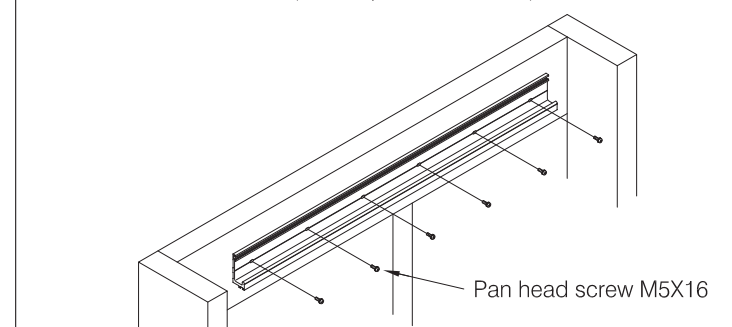
③ Setting rail mounting holes.

- Tap a holes (M5, P=0.8) horizontally at intervals of 300mm with the hole specified below as the reference point.
 - Dimension from the inside of the sash on the door front end = 170mm
 - Dimension from the bottom of the top frame of the sash = 70mm (When the cover between the top of frame and door is 10mm)
- If the dimension A in the diagram below is no less than 170mm, tap a hole at 100mm from the inside of the sash. (A: Dimension from the final hole at a pitch of 300 to the inside of the sash on the door back end)



④ Installing the rail

- Install the rail with screws (M5x16 pan head screw).



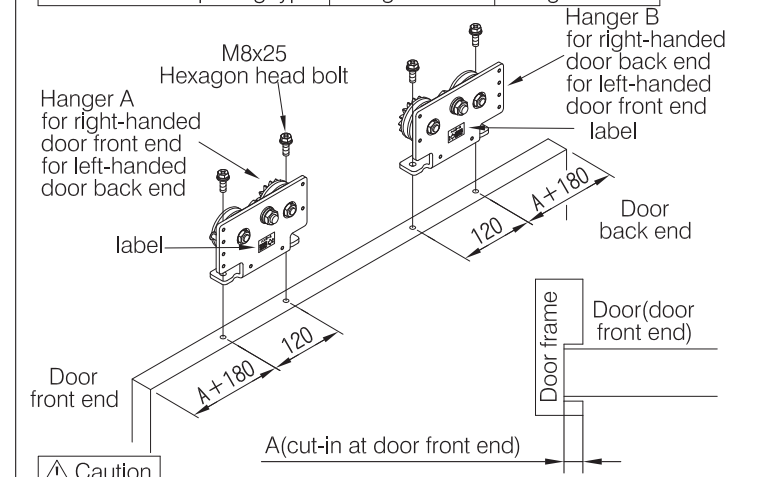
⚠ Caution

- When installing a rail, take care not to scratch the runway.

2 Installing the hanger

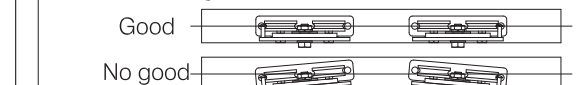
- Making holes in the top of door.
- As shown in the diagram, install the hanger A and B.

	Door front end	Door back end
Right-handed opening type	Hanger A side	Hanger B side
Left-handed opening type	Hanger B side	Hanger A side



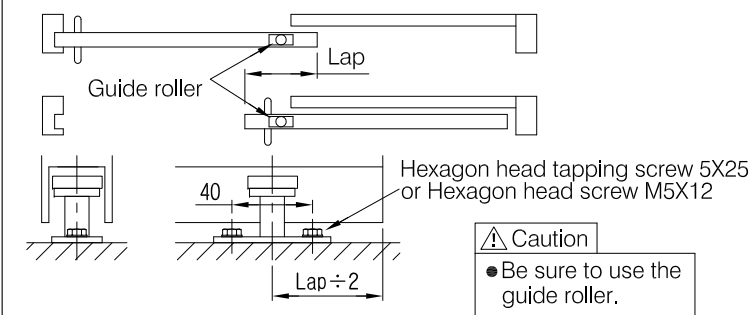
⚠ Caution

- Install the hanger on the centerline of the door.



3 Installing the guide roller (optional)

- Install the guide roller in the middle of the door lap.
- Install the guide roller so that the door becomes vertical with the floor.
- In case of floor is concrete ,Use the fisher plug .(Twist drill is 6mm)

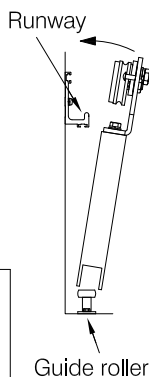


4 Mounting the door

1 Mounting the door

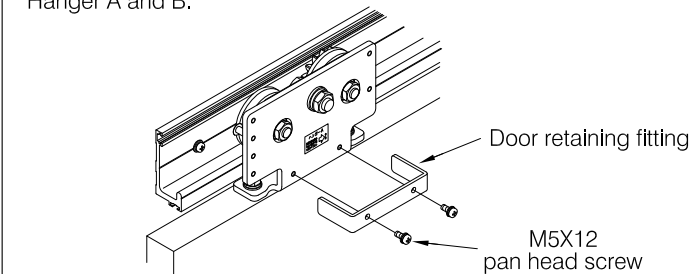
- Before mounting the door, wipe off the dirt from the rail runway.
- Match the door bottom to the guide roller, then suspend the door rollers and mount them onto the rail runway.
- Check that the door operates smoothly.
- Adjust the clearance between the door and jamb by varying the number of height adjusting plates used.

- Caution**
- When mounting the door, take care not to scratch the rail runway.
 - Be sure to install the control device after mounting the door. When suspending and mounting it, the door may strike and damage the rail and other component.



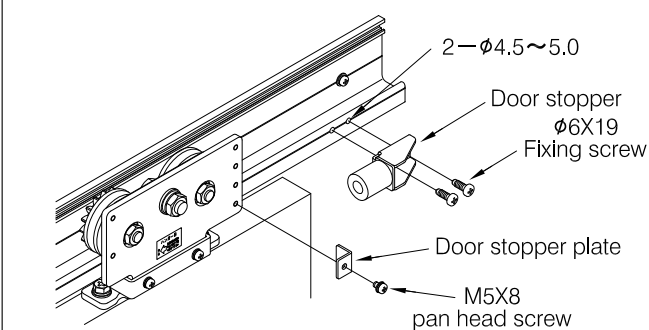
2 Installing the door retaining screw.

- Tighten the door retaining fitting with Pan head screw M5X12 in the Hanger A and B.



5 Installing the door stopper

- Install the door stopper plate on the hanger on the door back end with screws(M5 X 8 pan head screws)
- Install the door stopper in the rail runway.
See the 1 Installing a rail 3 Drilling a hole for door stopper



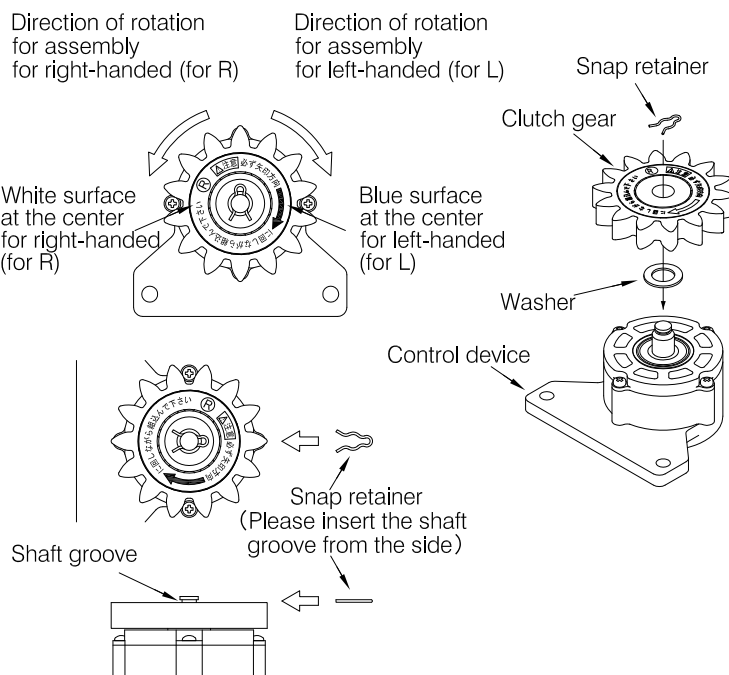
6 Installing the control device

The control device is interchangeable with right hand operation and left hand opretion .The orientation of the clutch gear determines whether it is right or left hand.

1 Procedure for clutch gear

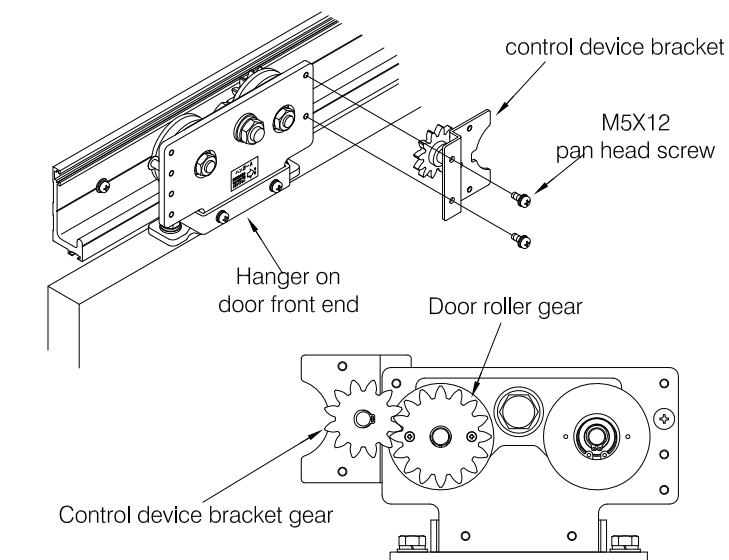
Insert the washer into the shaft of the control devices. Insert the clutch gear follow the below instructions.

- 《If right-handed opening》
Make the red color sticker (R printed) face upwards, and then insert it while turning (follow the printed direction on the sticker) it.
- 《If left-handed opening》
Make the blue color sticker (L printed) face upwards, and then insert it while turning (follow the printed direction on the sticker) it.
- Be sure to confirm the direction of clutch gear correctly, or control device will not work. Refer to control direction is below the drawing. Install the snap retainer in the groove at the tip of the shaft.



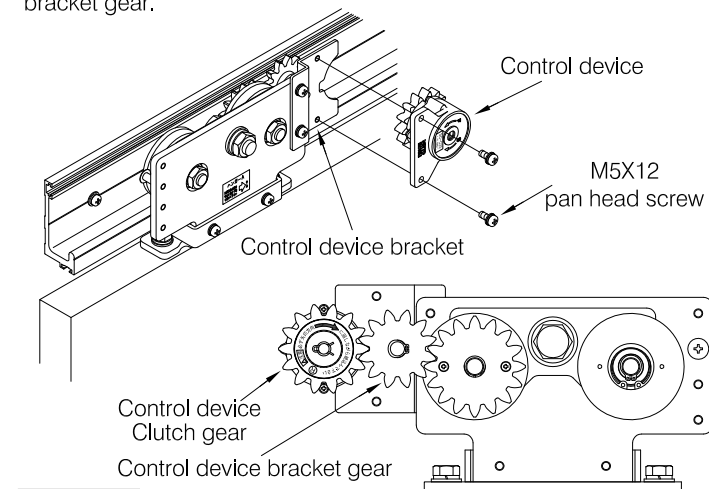
2 Installing the Control device bracket

- Install the control device bracket with M5X12 Pan head screw on the door front end hanger.
- Be sure to correct engagement Hanger gear and Control device bracket gear.



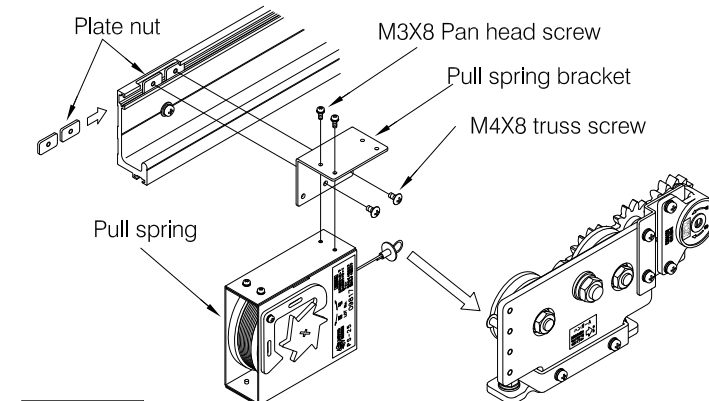
3 Installing the control device

- Install the Control device on the Control device bracket with screw (M5X12 Pan head screw)
- Be sure to correct engagement Control device gear and Control device bracket gear.



7 Installing The Pull spring

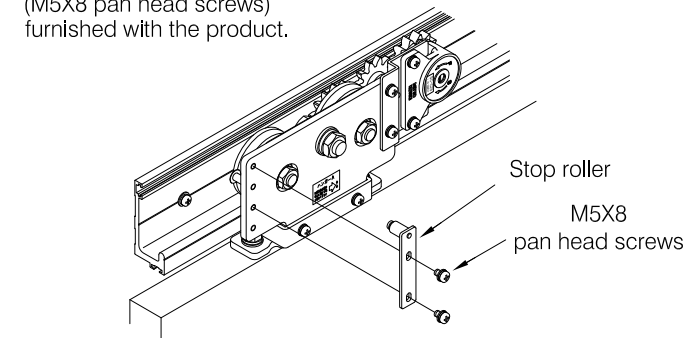
- Install the Pull spring bracket on the Pull spring with screw (M3X8 Pan head screw)
- Insert the pleat nut in the T groove in the rail, Then install Pull spring bracket with the screw (M4X8 truss screw)
- Hook the wire to the Door front hanger.
- The pull spring can be converted to the right hand and left hand operation.Be sure to confirm the sticker is in front.



8 Installing the Stop device

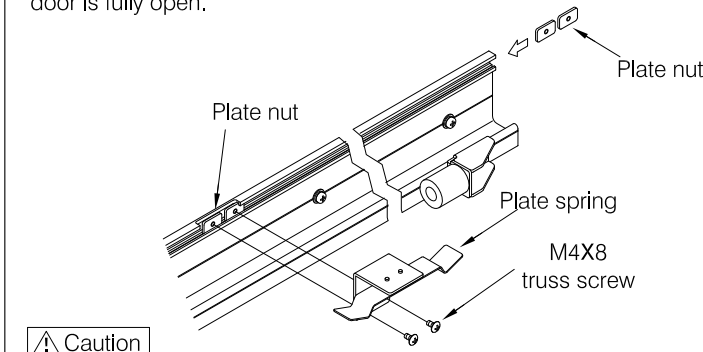
1 installing the stop roller

- Install the stop roller on the hanger on the door front end with screws (M5X8 pan head screws) furnished with the product.



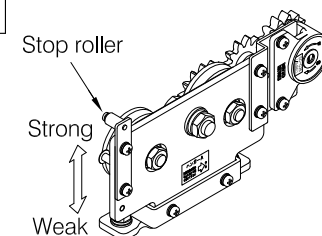
2 Installing the plate spring

- Insert the plate nuts in the T groove in the rail, then install the plate spring with screws (M4X8 truss screws) furnished with the product.
- Adjust the position of the plate spring to stop to at the position where the door is fully open.



3 Adjusting the stopping force.

- Move the stop roller up and down to adjust the stopping force.
- Increase the stopping force :
Upward the stop roller
- Reduce the stopping force :
Downward the stop roller

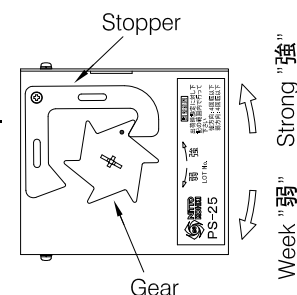


9 Adjusting the closing force and speed

1 Adjusting the closing force

- If the closing force needs adjustment, turn the gear shaft with a screwdriver for adjustment. Label on the component
Turn it in the direction of "Strong" => to increase the closing force.
Turn it in the direction of "Weak" => to decrease the closing force.
- <Adjustment range>
Be sure to adjustment within the limits of following instructions.

Model	PS-12
Strong	4 turn from factory setting
Week	4 turn from factory setting

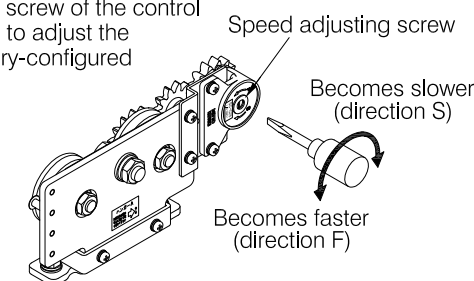


- Be sure to confirm the pull spring stopper is hooked with gear.

- Caution**
- Over winding it in the direction of "strong" will cause a breakdown. Be sure to set it to a value not exceeding the number of windings indicated on the sticker on the component.

2 Adjusting the closing speed

- Turn the speed adjusting screw of the control device with a screwdriver to adjust the closing speed. (It is factory-configured to the highest speed.)



- Caution**
- Turn the speed adjusting screw lightly. Otherwise an imperfect control may result. After turning it all the way home, do not turn it with overstrain. A change in the ambient temperature varies the closing speed somewhat. As the temperature rises, the speed increases. As the temperature declines, the speed decreases.

Installation is completely.